Environmental Programs

State Revolving Fund Loan Programs

Drinking Water, Wastewater, Nonpoint Source

PRELIMINARY DECISION OF CATEGORICAL EXCLUSION

TO ALL INTERESTED CITIZENS, ORGANIZATIONS AND GOVERNMENT AGENCIES:

CITY OF ANGOLA
Wastewater System Improvements
SRF # WW09 23 76 02

Date: July 28, 2009

Target Project Approval Date: August 27, 2009

Pursuant to IC 4-4-11, the State Revolving Fund (SRF) Loan Program has determined that the project described here and in the City of Angola Preliminary Engineering Report submitted to the SRF on March 11, 2009 will have no substantial negative environmental impact. Therefore, the SRF is issuing a preliminary decision of Categorical Exclusion from the requirements of substantive environmental review.

How were environmental issues considered?

The National Environmental Policy Act (NEPA) requires agencies disbursing Federal funds to include environmental factors in the decision making process. A summary of the project is attached for your review. The SRF's preliminary review has found that the proposed project does not require the preparation of either an EA or an EIS.

Why is additional environmental review not required?

Our environmental review has concluded that significant environmental impacts will not result from the proposed action.

How do I submit comments?

Comments can be submitted to:

Amy Henninger, Senior Environmental Manager
SRF Programs
317-232-6566; ahenning at ifa.in.gov

CATEGORICAL EXCLUSION

I. PROJECT IDENTIFICATION

Project Name and Address:	Wastewater System Improvements City of Angola 210 N. Public–Square Angola, Indiana 46703
SRF Project Number:	WW092376 02
Authorized Representative:	The Honorable Richard M. Hickman, Mayor

II. PROJECT LOCATION

The proposed project is located within the corporate limits of City of Angola in Steuben County. The Project Area is in Pleasant Township in Angola East and Angola West USGS Quadrangles, T37N, R13E, Sections 14, 23, 25, 26, 27, and 35. See Figure 1 for the overview of the project work sites.

III. PROJECT NEED AND PURPOSE

The City of Angola Wastewater Treatment System Improvements project consists of two separate parts:

1) Collection System Rehabilitation:

The city of Angola is a Combined Sewer Overflow (CSO) community with aging sewer infrastructure. Wet weather flows in both combined and separate sewers, particularly when combined with flow restrictions (root intrusions, mineral deposits, etc.) result in chronic operational problems such as surcharging, backups and CSO events. In addition, lift stations and manholes inspections have revealed aging equipment, underperforming pumps, and deteriorated structures.

Indiana Department of Transportation (INDOT) is planning a full surface replacement of asphalt along US 20 (Maumee St.) in Angola for the fall of 2010. Because sewer televising in this area has revealed significant damage, INDOT supports the City's desire to rehabilitate Maumee St. sewers prior to pavement replacement. Portion of the sewer and lift station problems occur on the campus of Trine University failure of any portion of this system would have an immediate and dire effect on the university's approximately 1200 students and staff.

The city evaluated three alternatives for the collection system improvement:

A. No Action - The "no action" alternative involves no improvements to the collection system. This alternative is non-compliant with the City's CSO

Long Term Control Plan (LTCP) for sewer separation. The no action alternative is hereby removed from further consideration.

B. Collection System Replacement - The alternative of abandoning portions of the collection system was evaluated given the age and condition of sewers, manholes, and lift stations. This alternative would require open excavation to replace deteriorated segment of the collection system. Maumee Street, where the majority of work would take place, is a heavily travelled business corridor and cannot afford the extended closures required for open excavation construction. A trenchless method of rehabilitating the collection system is required.

C. Collection System Rehabilitation - This alternative utilizes trenchless cured in place pipe (CIPP) lining to rehabilitate existing sewers wherever feasible. Lift stations and manholes will also receive rehabilitation or will be replaced without excavation of undisturbed areas. Trenchless rehabilitation, particularly CIPP lining, will be a benefit to both the ratepayers and the environment as it results in decreased trucking, fuel consumption, construction time, and ultimately a lower cost. This alternative is the recommended alternative.

The following summarizes the extent and estimated quantities of the work proposed for the Collection System Rehabilitation:

- One (1) excavated point repair of approximately 10 lineal feet (LF) required for the CIPP installation (Park Avenue site);
- The rehabilitation of approximately 8,670 LF of 6-inch to 30-inch diameter sewers using the CIPP method;
- The installation approximately 735 LF of new 10-inch diameter Sanitary Sewer;
- The installation of approximately 750 LF of new 8-inch sanitary sewer;
- The installation of one (1) new sanitary manhole;
- The replacement of 27 sanitary manholes;
- The rehabilitation of five (5) existing Lift Stations.

2) Wastewater Treatment Plant (WWTP) Aeration System Improvements:

The aeration is carried out in three circular tanks, each 45 feet in diameter. Air is fed from three blowers operating as duty/duty/standby. Blowers operate continuously. Fabric baffles were installed in the circular aeration tans in 2005. The baffles were installed in a trial bases to increase the effective volume of the aeration basin by eliminating short-circuiting, thus improving BOD and ammonia removal. The fabric baffles have significantly improved ammonia removal in the system; however, they have deteriorated and are in need of replacement with a more permanent construction. Figure 2 presents an overhead view of the wastewater treatment plant highlighting the tanks and infrastructure discussed herein.

The City has exceeded their NPDES permit effluent limits for suspended solids and ammonia at various times during the past 4 years. This has been contributed in large part to failure of the fabric baffles and shearing of floc from the high air flow rates in the

aeration basins.

Although dissolved oxygen (DO) is measured, there is no automated control of the amount of air fed to the aeration tanks, meaning at low loadings there is an excess of air. Even though each tank has a DO probe, they are unreliable and are currently used for monitoring only.

The bearings for one of the three existing blowers are worn and the base for another blower is deteriorated. Blowers 1 & 2 are operational; however, all three blowers are approximately 19 years old. The blowers are inappropriately sized; one blower at average day demand and at minimum rated air discharge rate provides more air that the system requires. During periods of high demand, two blowers provide more air than is required by the system.

The City believes the excursions of effluent limitations for suspended solids during high flow periods is due in part to shearing of floc from the high air flow rates in the aeration basins. Better control of the air flow rates should reduce the periodic excursions in the effluent suspended solids above the WWTP NPDES effluent limits.

The Blower Building, Laboratory and Maintenance Building have minimal insulation above the ceiling. Water pipes in these areas must be left running in the winter months to prevent freezing. Insulation can be installed above the ceiling of these buildings for an estimated cost of $40,000.

Various alternatives including the "No Action" alternative was considered to resolve the above operational issues at the WWTP. The following items summarize the most cost effective and energy efficient WWTP Improvements proposed for this project:

- Concrete Baffles (3);Aeration Blowers (Two Turbo blowers) with associated piping, individual tank controls and electrical;
- D.O. Control, meters, valves, electrical & programming;
- Membrane Diffusers;
- Building Insulation (3 locations).

IV. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

Estimated Project Cost Summary

Construction Costs	
Collection system Improvement	$1,050,000
WWTP Aeration Improvement	$496,000
Construction Subtotal	$1,546,000
Contingencies	$155,000
Total Construction Cost	$1,701,000
Non- Construction Costs	
Engineering, Legal, Financial Services	$260,000
Total Estimated Project Costs	$1,961,000

Angola will finance the Wastewater System project with a 20-year loan of approximately $1,961,000 from the State Revolving Fund Loan Program (SRF) at an annual interest rate to be determined at the loan closing. Monthly user rates and charges may need to be analyzed to determine if adjustment s are required for loan repayment.

The costs associated with the rehabilitation or replacement of privately owned segments (if any included in the project) of the proposed collection system improvements, such as privately owned and maintained sanitary service laterals, are ineligible for financing through SRF Wastewater Loan Program and need to be identified in the contract documents.

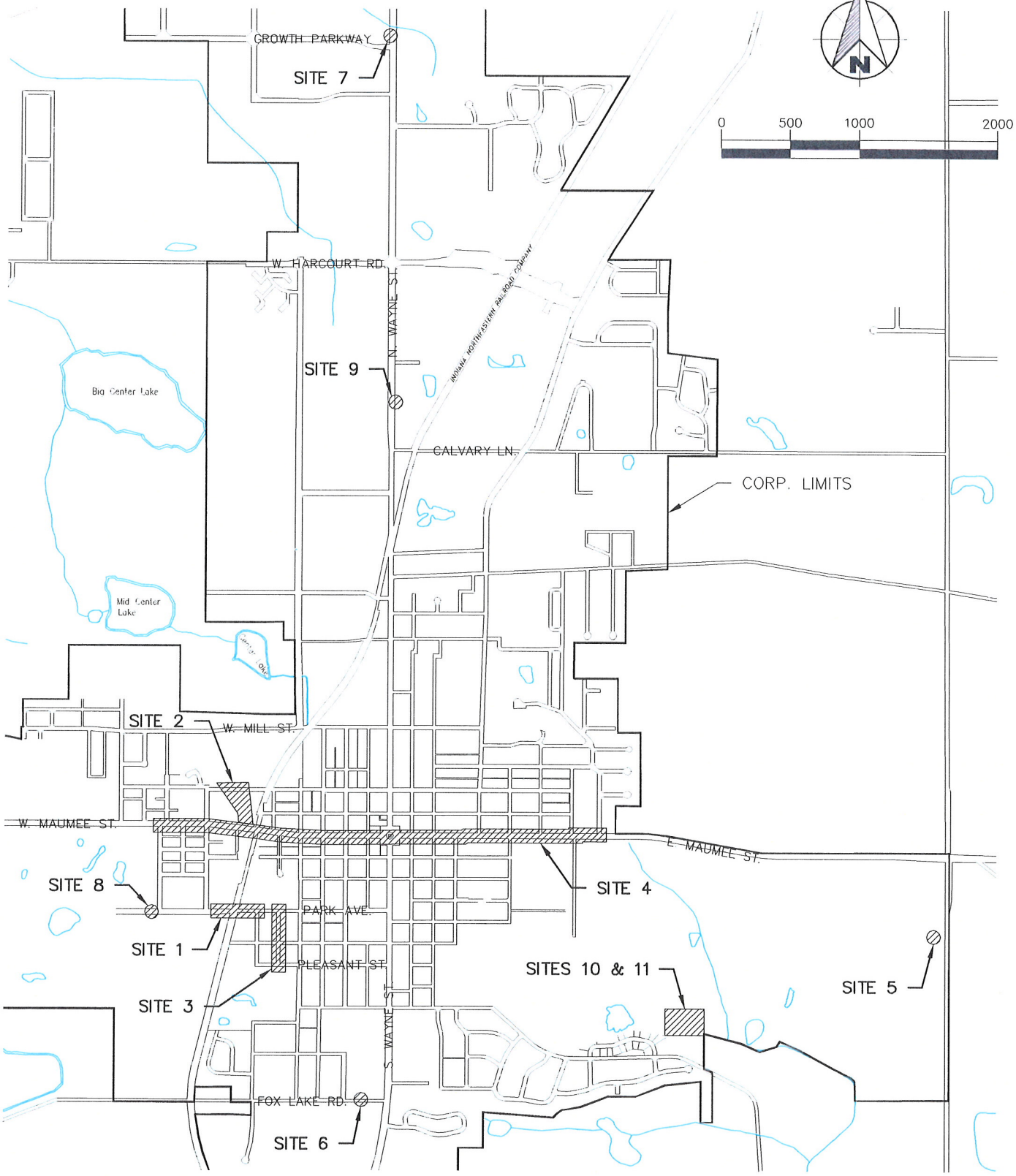
The WWTP Aeration System Improvement part of the project proposes Turbo blowers for energy efficiency. The proposed Turbo blowers use approximately 26% less energy than the conventional centrifugal blowers.

V. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

The environmental impacts will be minimal. All project activities will take place within previously disturbed roads, property, lift stations and manholes. There will be no disturbance of the ground around the lift station. The project will not affect historic sites, including sites on or eligible for listing on the National Register of Historic Places, according to the Pleasant Township Interim Report (Figure 3, 4 & 5) and the historic sites information on the website of the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "*no historic properties affected.*"

VI. PUBLIC PARTICIPATION

A properly noticed public hearing was held on March 16 ,2007 at the City Hall, 210 North Public-Square to discuss the project's Preliminary Engineering Report (PER). No negative comments on this project were voiced at the public hearing, and no written comments were submitted in the ten-day period following the hearing.



DRAWN BY	CHECKED BY	APPROVED BY
E.M.Z.	R.K.B.	E.T.H.

DRAWING SCALE
1" = 2000'

PROJECT NUMBER
126309.01.01

WESSLER ASSOCIATES
M. D. Wessler & Associates, Inc.
6219 South East Street, Suite A
Indianapolis, Indiana 46227-2168
Phone: 317-788-4551 - Fax: 317-788-4553
www.mdwessler.com

PER - WASTEWATER IMPROVEMENTS

CITY OF ANGOLA
ANGOLA, INDIANA

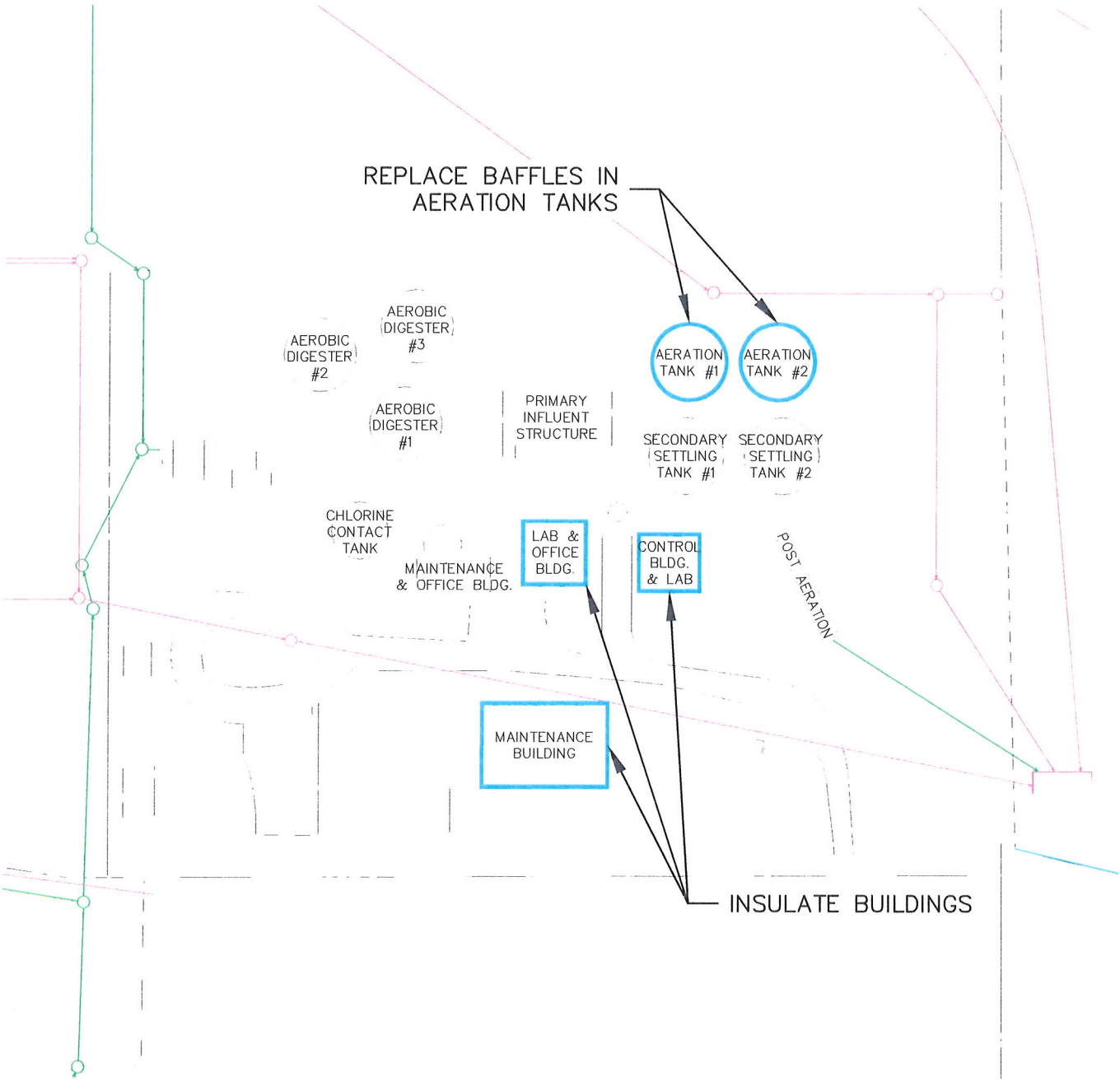
FIGURE 1
SYSTEM OVERVIEW MAP
& PROJECT SITES

CURRENT SHEET NO.
01

TOTAL SHEETS
01

J-01-01dwg\126309-01-01-EX.dwg | Layout: System Overview | Plotted: 02/27/09 @ 11:17:06 | User: Emily Zeigler

Drawing N:\Land Proje



LEGEND:

- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING COMBINED SEWER
- EXISTING FORCE MAIN
- ABANDON SEWER SEGMENT
- NEW SANITARY SEWER
- CIPP SEWER LINING
- POINT REPAIR
- MANHOLE REHAB
- LIFT STATION REHAB
- WWTP REHAB
- NEW SANITARY MANHOLE

N

0 50 100 200

DRAWN BY	CHECKED BY	APPROVED BY
E.M.Z.	R.K.B.	E.T.H.

DRAWING SCALE: 1" = 100'

PROJECT NUMBER: 126309.01.01

WESSLER ASSOCIATES
M. D. Wessler & Associates, Inc.
6319 South East Street, Suite A
Indianapolis, Indiana 46227-2148
Phone: 317-888-4551 - Fax: 317-888-4553
www.mdwessler.com

PER - WASTEWATER IMPROVEMENTS

CITY OF ANGOLA
ANGOLA, INDIANA

FIGURE ~~A-11~~ 2
SITES 10 & 11 - WASTEWATER TREATMENT PLANT IMPROVEMENTS

CURRENT SHEET NO. 01

TOTAL SHEETS 01

Drawing: N:\Land Projec ~01-01\dwg\126309-01-01-EX.dwg | Layout: Sites 10 & 11 | Plotted: 02/27/09 @ 11:18:30 | User: Emily Zeigler

Pleasant Township
25001-25145

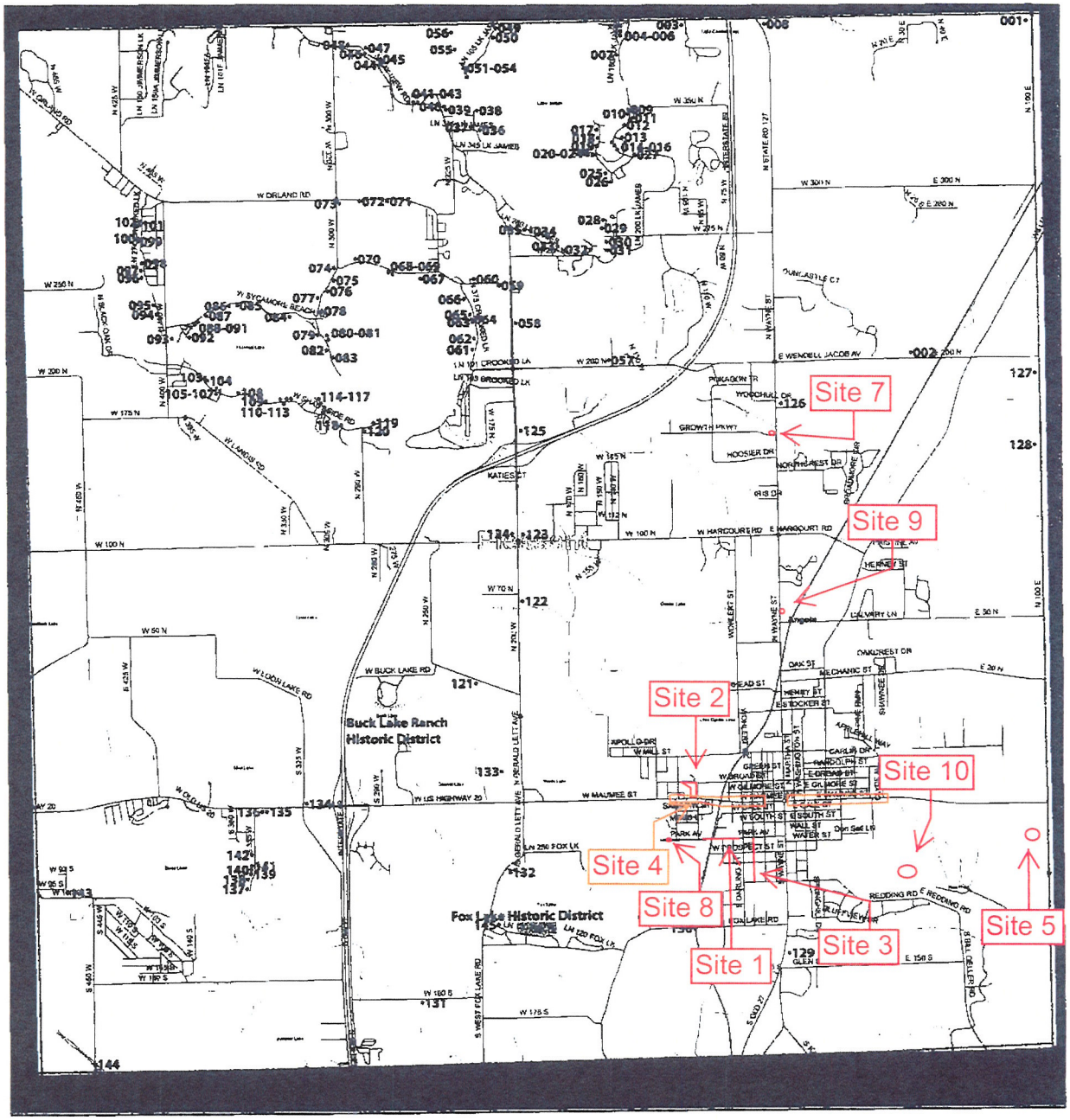


Figure 3

City of Angola
Scattered Sites
30001 - 30168

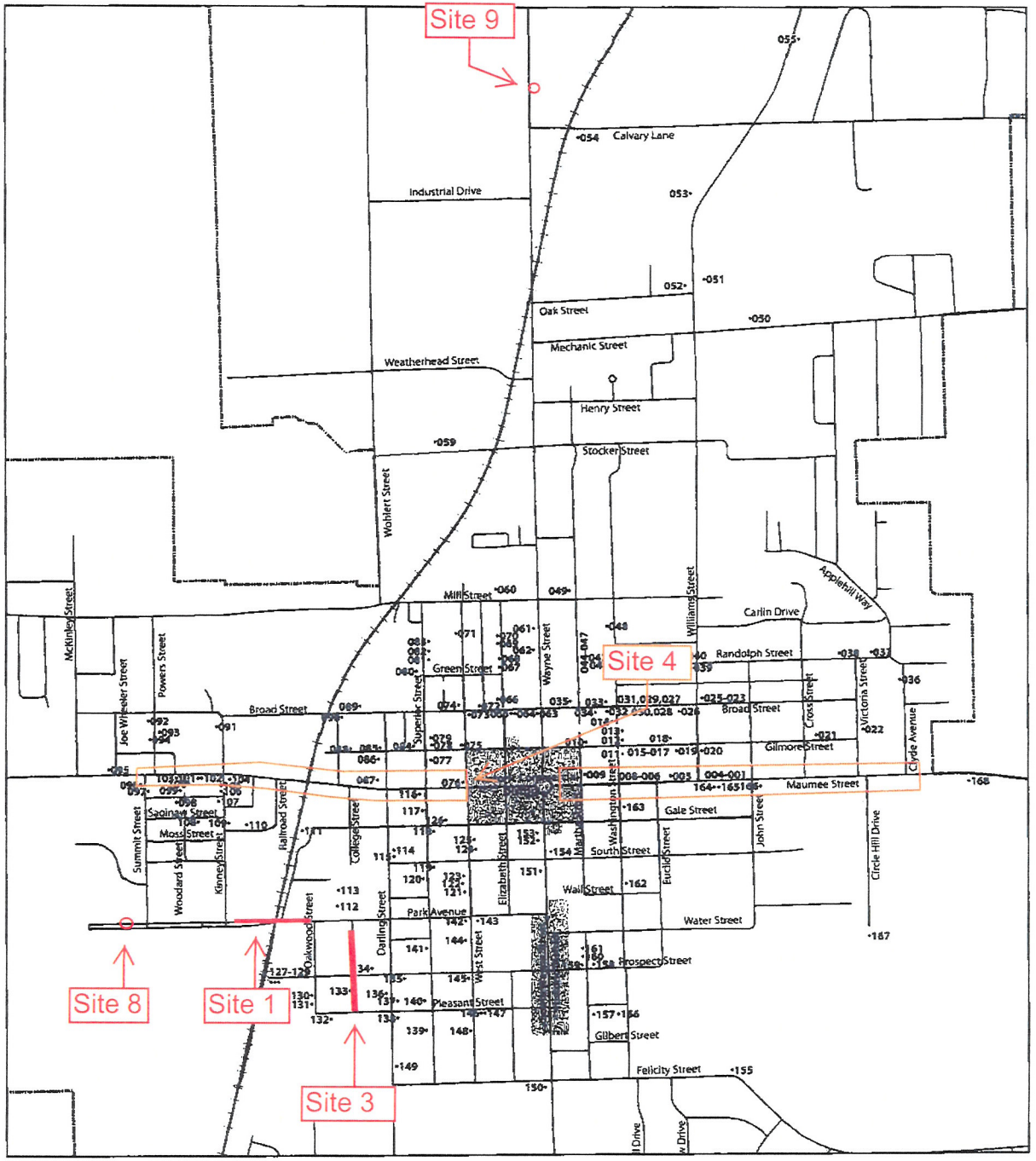


Figure 4

PLEASANT TOWNSHIP

Downtown Angola Historic Commercial District
28001-28067

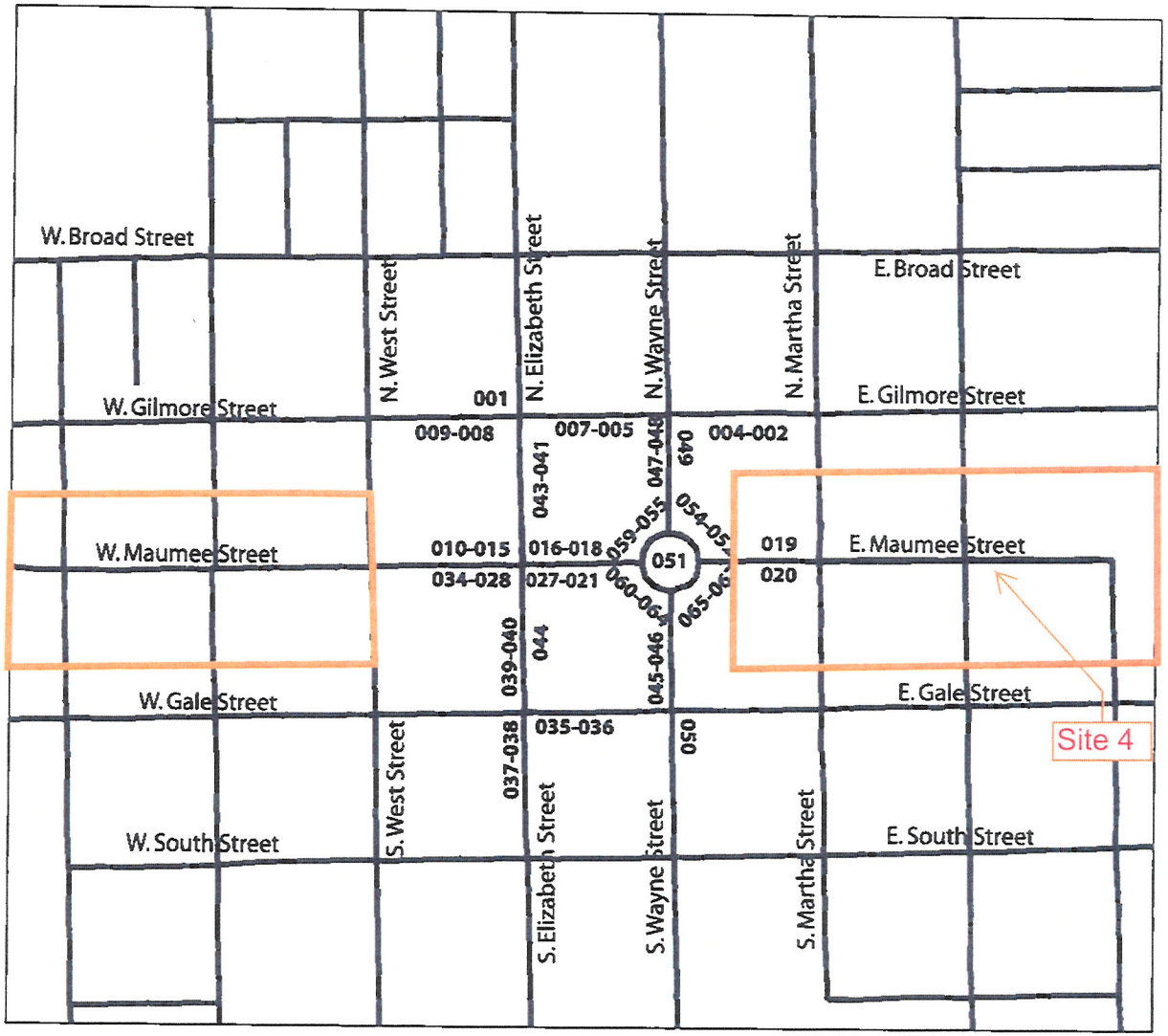


Figure 5